

UNITED STATES DISTRICT COURT

for the
Western District of Washington

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Jul 30, 2021	
CLERK U.S. DISTRICT COURT WESTERN DISTRICT OF WASHINGTON AT TACOMA	
BY	DEPUTY

In the matter of the Search of

 Information that is stored at premises controlled by
 Google, for Investigation of 18 U.S.C. § 1855 and
 Other Offenses

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Case No. MJ21-5168

APPLICATION FOR A GEOFENCE SEARCH WARRANT

I, a federal law enforcement officer for the government, request a search warrant and state under penalty of perjury that I have reason to believe that on the person or property described in Attachment A, located in the Western District of Washington, there is now concealed property and evidence as described in Attachment B.

The basis for the search under Fed. R. Crim. P. 41(c) is (check one or more):

- ☒ evidence of a crime;
☐ contraband, fruits of crime, or other items illegally possessed;
☒ property designed for use, intended for use, or used in committing a crime;
☐ a person to be arrested or a person who is unlawfully restrained.

The search is related to a violation of:

Code Section
 18 U.S.C. § 1855
Offense Description

Willfully and without authority, sets on fire any timber, underbrush, or grass or other inflammable material upon the public domain or upon any lands owned under the partial, concurrent, or exclusive jurisdiction of the United States.

The application is based on the facts set forth in the attached affidavit, which is incorporated herein by reference with all attachments and exhibits.

Pursuant to Fed. R. Crim. P. 41, this warrant is presented by:

☒ by reliable electronic means; or ☐ telephonically recorded

CHRISTIAN ROPER

 Digitally signed by CHRISTIAN
 ROPER
 Date: 2021.07.29 13:38:59 -07'00'
Applicant's signature

CHRISTIAN ROPER, Law Enforcement Officer

Printed name and title

- ☐ The foregoing affidavit was sworn before me and signed in my presence, or
☒ The above-named officer provided a sworn statement attesting to the truth or the foregoing affidavit by telephone/

7/30/21

Date: ~~7/28/2021~~

Judge's signature

J. Richard Creatura, United States Magistrate Judge

*Printed name and title*City and state: Tacoma, Washington

1 STATE OF WASHINGTON)
2) ss
3 COUNTY OF LEWIS)

4
5 **AFFIDAVIT IN SUPPORT OF AN APPLICATION**
6 **FOR A GEOFENCE SEARCH WARRANT**

7 I, CHRISTIAN ROPER, an Officer with the US Forest Service, being first duly
8 sworn, hereby depose and state as follows:

9 **INTRODUCTION AND AGENT BACKGROUND**

10
11 1. I make this affidavit in support of an application for a warrant to search
12 information that is stored at premises controlled by Google LLC (“Google”), an
13 electronic communication service and remote computing service provider headquartered
14 in Mountain View, California that maintains multiple offices in both Seattle and
15 Kirkland. The information to be searched is described in the following paragraphs and in
16 Attachment A. This affidavit is made in support of an application for a warrant under 18
17 U.S.C. § 2703(c)(1)(A) to require Google to disclose to the government the information
18 further described in Attachment B, Section I. The government will then review that
19 information and seize the information that is further described in Attachment B, Section
20 II.

21 2. The purpose of this affidavit is to obtain information identifying cellular
22 devices that were within four limited geographic areas on the date and times when five
23 suspected wildland arson fires were discovered. The four distinct geographical areas are
24 in remote settings within or adjacent to the Snoqualmie National Forest, Forest Route
25 (FR) 74; Gifford Pinchot National Forest, FR 85; and the Tahoma State Forest, FR 1.

26 3. I have been a Law Enforcement Officer with the US Forest Service since
27 May 2017. I am a graduate of the Federal Law Enforcement Training Center and the U.S.
28 Forest Service Field Training and Evaluation Program. Prior to my employment with the
U.S. Forest Service, I have been a federal law enforcement officer for approximately 17

1 months with US Customs and Border Protection, and for approximately 18 months with
2 the National Park Service. Each of the previous two agencies required 10-19 week
3 trainings accredited by the Federal Law Enforcement Training Accreditation. I have a
4 Bachelor's degree from West Virginia University.

5 4. Over the past nine years, I have conducted hundreds of investigations,
6 including but not limited to: timber theft, resource damage, occupancy and use, fire
7 investigations, marijuana cultivation, fatalities, assaults and many others.

8 5. My training in fire investigations includes courses internationally approved
9 by the National Wildfire Coordination Group, including FI-110 Wildland Fire
10 Observations and Origin Scene Protection for First Responders, FI-210 Wildland Fire
11 Origin and Cause Determination, and FI-310 Wildland Fire Investigation: Case
12 Development. During these courses of training, I received training in the professional
13 standards of wildland fire investigation, fire behavior, identifying and recognizing burn
14 patterns, identifying and collecting fire scene evidence, investigation methodology,
15 interviewing, search warrant development, and courtroom preparation and testimony. I
16 am currently qualified as a Wildland Fire Investigator and as a Wildland Fire
17 Investigation Team Member. Additionally, I have taught several classes on recognizing
18 and protecting wildland fire crime scenes.

19 6. I am a "law enforcement officer" of the United States within the meaning of
20 that term contained at 18 U.S.C. § 2510(7) who is empowered by law to conduct
21 investigations of, and to initiate arrests for, various offenses that occur on or affect
22 national forest lands.

23 7. In addition to my training, I am an experienced wildland fire investigator. I
24 am a member of the US Forest Service Region 3 Wildland Fire Investigation Team
25 (WFIT), which investigates large and complex fires that occur on National Forest System
26 lands in Arizona and New Mexico. I have investigated dozens of wildland fires in various
27 geographical areas and with varying vegetation types. For several of these fire
28 investigations, I served as a qualified investigator with a trainee investigator working
under my oversight. I have observed wildland fire burn patterns in dozens more instances

1 while working directly in and adjacent to wildland fires while serving in other roles as a
2 firefighter and a law enforcement officer.

3 8. The information contained in this affidavit is based upon my personal
4 knowledge, observations of other law enforcement officers and individuals, my review of
5 official police and government reports, and consultation with other personnel involved in
6 the investigation.

7 9. This affidavit is intended to show merely that there is sufficient probable
8 cause for the requested warrant and does not set forth all my knowledge about this matter.

9 10. Based on my training and experience and the facts as set forth in this
10 affidavit, there is probable cause to believe that violations of 18 USC § 1855, 36 CFR
11 261.5 (a), and 36 CFR 261.5 (e) have been committed by unknown persons. There is also
12 probable cause to search the information described in Attachment A for evidence of these
13 crimes as further described in Attachment B.

14 **JURISDICTION**

15 11. This Court has jurisdiction to issue the requested warrant because it is “a
16 court of competent jurisdiction” as defined by 18 U.S.C. § 2711. Specifically, the Court
17 is “a district court of the United States . . . that has jurisdiction over the offense being
18 investigated.” 18 U.S.C. § 2711(3)(A)(i).

19 **BACKGROUND AND RELEVANT TECHNOLOGY**

20 *Fire Investigation Techniques*

21 12. As a wildland fire spreads, it leaves behind fire pattern indicators. Fire
22 pattern indicators are physical objects that display changes from exposure to heat, flame,
23 and combustion byproducts. Analyzing fire pattern indicators helps fire investigators
24 determine the origin of wildland fires because accurate analysis of fire pattern indicators
25 reveals the direction in which wildland fires spread. Additionally, wildland fire
26 investigators can use fire pattern indicators to determine the location where wildland fires
27 originally ignite through a process known as “backtracking.”
28

1 13. Upon locating the origin location of a wildland fire, wildland fire
2 investigators then determine the cause of the fire. Based on my training and experience, I
3 know that there are nine causal categories of wildland fires: (i) lightning, (ii) campfires,
4 (iii) smoking, (iv) debris burning, (v) arson/incendiary, (vi) equipment use, (vii) railroads,
5 (viii) children, and (ix) miscellaneous. The miscellaneous category includes several sub-
6 categories of fire causes such as fireworks, firearms, and welding.

7 14. To determine the cause of a wildland fire, fire investigators engage in a
8 systematic examination of the fire's origin location and adjacent area. This analysis leads
9 to the exclusion of causal categories for which no evidence exists. For example, if fire
10 investigators find no evidence of a campfire within the fire's general origin location and
11 adjacent area, then the wildland fire investigators can and do logically exclude a campfire
12 as the fire's cause. This systematic methodology, which requires a careful examination of
13 a fire's origin location and adjacent area, eventually leads to fire investigators making a
14 causal determination. Typically, this determination occurs once fire investigators
15 logically exclude all, but one possible cause of the wildland fire based on evidence
16 recovered within the fire's origin location and adjacent area.

17 15. As stated above, one of the nine causal categories of wildland fire is
18 arson/incendiary—fires that are deliberately or maliciously set by humans. Based on my
19 training and experience, I know that there are many indications of arson-caused fires,
20 including the following:

- 21 ○ They are often set in multiples in a relatively short amount of time, such as
22 during the same day during a single spree of arson-setting, or over a matter
23 of weeks or months;
- 24 ○ They typically occur in close geographic proximity to one another;
- 25 ○ They often ignite in areas where other arson-suspected fires have been set
26 in the past;
- 27 ○ They are commonly set near roads that can accommodate motor vehicle
28 travel, which provides a convenient means for arsonists to quickly leave the
 origin areas of the fires they set;

- 1 ○ They are frequently characterized by a lack of causal evidence within the
2 origin location and surrounding geographic area, because of the ease with
3 which an arsonist can ignite a wildland fire simply by applying a lighter to
4 brush along the side of a road;
- 5 ○ They are often set at night, because arsonists benefit from darkness
6 reducing the risk they will be seen by witnesses.

7 Background Relating to Google and Relevant Technology

8 16. Based on my training and experience, I know that cellular devices, such as
9 mobile telephone(s), are wireless devices that enable their users to send or receive wire
10 and/or electronic communications using the networks provided by cellular service
11 providers. Using cellular networks, users of many cellular devices can send and receive
12 communications over the Internet.

13 17. I also know that many devices, including but not limited to cellular devices,
14 can connect to wireless Internet (“wi-fi”) access points if the user enables wi-fi
15 connectivity. These devices can, in such cases, enable their users to send or receive wire
16 and/or electronic communications via the wi-fi network. A tablet such as an iPad is an
17 example of a device that may not have cellular service but that could connect to the
18 Internet via wi-fi. Wi-fi access points, such as those created by a router and offered in
19 places like homes, hotels, airports, and coffee shops, are identified by a service set
20 identifier (“SSID”) that functions as the name of the wi-fi network. In general, devices
21 with wi-fi capability routinely scan their environment to determine what wi-fi access
22 points are within range and will display the names of networks within range under the
23 device’s wi-fi settings.

24 18. Based on my training and experience, I also know that many devices,
25 including many cellular and mobile devices, feature Bluetooth functionality. Bluetooth
26 allows for short-range wireless connections between devices, such as between a device
27 such as a cellular phone or tablet and Bluetooth-enabled headphones. Bluetooth uses
28 radio waves to allow the devices to exchange information. When Bluetooth is enabled, a
 device routinely scans its environment to identify Bluetooth devices, which emit beacons

1 that can be detected by devices within the Bluetooth device's transmission range, to
2 which it might connect.

3 19. Based on my training and experience, I also know that many cellular
4 devices, such as mobile telephones, include global positioning system ("GPS")
5 technology. Using this technology, the device can determine its precise geographical
6 coordinates. If permitted by the user, this information is often used by apps installed on a
7 device as part of the apps' operation.

8 20. Based on my training and experience, I know Google is a company that,
9 among other things, offers an operating system ("OS") for mobile devices, including
10 cellular phones, known as Android. Nearly every device using the Android operating
11 system has an associated Google account, and users are prompted to add a Google
12 account when they first turn on a new Android device.

13 21. In addition, based on my training and experience, I know that Google offers
14 numerous apps and online-based services, including messaging and calling (*e.g.*, Gmail,
15 Hangouts, Duo, Voice), navigation (Maps), search engine (Google Search), and file
16 creation, storage, and sharing (*e.g.*, Drive, Keep, Photos, and YouTube). Many of these
17 services are accessible only to users who have signed in to their Google accounts. An
18 individual can obtain a Google account by registering with Google, and the account
19 identifier typically is in the form of a Gmail address (*e.g.*, example@gmail.com). Other
20 services, such as Maps and YouTube, can be used with limited functionality without the
21 user being signed in to a Google account.

22 22. Based on my training and experience, I also know Google offers an Internet
23 browser known as Chrome that can be used on both computers and mobile devices. A
24 user can sign-in to a Google account while using Chrome, which allows the user's
25 bookmarks, browsing history, and other settings to be uploaded to Google and then
26 synced across the various devices on which the subscriber may use the Chrome browsing
27 software, although Chrome can also be used without signing into a Google account.
28 Chrome is not limited to mobile devices running the Android operating system and can
also be installed and used on Apple devices and Windows computers, among others.

1 23. Based on my training and experience, I know that, in the context of mobile
2 devices, Google's cloud-based services can be accessed either via the device's Internet
3 browser or via apps offered by Google that have been downloaded onto the device.
4 Google apps exist for, and can be downloaded to, devices that do not run the Android
5 operating system, such as Apple devices.

6 24. According to my training and experience, as well as open-source materials
7 published by Google, I know that Google offers accountholders a service called
8 "Location History," which authorizes Google, when certain prerequisites are satisfied, to
9 collect and retain a record of the locations where Google calculated a device to be based
10 on information transmitted to Google by the device. That Location History is stored on
11 Google servers and is associated with the Google account associated with the device.
12 Each account holder may view their Location History and may delete all or part of it at
13 any time.

14 25. Based on my training and experience, I know that the location information
15 collected by Google and stored within an account's Location History is derived from
16 sources including GPS data and information about the wi-fi access points and Bluetooth
17 beacons within range of the device. Google uses this information to calculate the device's
18 estimated latitude and longitude, which varies in its accuracy depending on the source of
19 the data. Google records the margin of error for its calculation as to the location of a
20 device as a meter radius, referred to by Google as a "maps display radius," for each
21 latitude and longitude point.

22 26. Based on open-source materials published by Google and my training and
23 experience, I know that Location History is not turned on by default. A Google
24 accountholder must opt-in to Location History and must enable location reporting with
25 respect to each specific device and application on which they use their Google account
26 for that usage to be recorded in Location History. A Google accountholder can also
27 prevent additional Location History records from being created at any time by turning off
28 the Location History setting for their Google account or by disabling location reporting
for a particular device or Google application. When Location History is enabled,

1 however, Google collects and retains location data for each device with Location
2 Services enabled, associates it with the relevant Google account, and then uses this
3 information for various purposes, including to tailor search results based on the user's
4 location, to determine the user's location when Google Maps is used, and to provide
5 location-based advertising. As noted above, the Google accountholder also can view and,
6 if desired, delete some or all Location History entries at any time by logging into their
7 Google account or by enabling auto-deletion of their Location History records older than
8 a set number of months.

9 27. Location data, such as the location data in the possession of Google in the
10 form of its users' Location Histories, can assist in a criminal investigation in various
11 ways. As relevant here, I know based on my training and experience that Google can
12 determine, based on location data collected and retained via the use of Google products
13 as described above, devices that were likely in a particular geographic area during a
14 particular time frame and to determine which Google account(s) those devices are
15 associated with. Among other things, this information can indicate that a Google
16 accountholder was near a given location at a time relevant to the criminal investigation by
17 showing that his/her device reported being there.

18 28. Based on my training and experience, I know that when individuals register
19 with Google for an account, Google asks subscribers to provide certain personal
20 identifying information. Such information can include the subscriber's full name,
21 physical address, telephone numbers and other identifiers, alternative email addresses,
22 and, for paying subscribers, means and source of payment (including any credit or bank
23 account number). In my training and experience, such information may constitute
24 evidence of the crimes under investigation because the information can be used to
25 identify the account's user or users. Based on my training and my experience, I know that
26 even if subscribers insert false information to conceal their identity, this information
27 often provides clues to their identity, location, or illicit activities.

28 29. Based on my training and experience, I also know that Google typically
retains and can provide certain transactional information about the creation and use of

each account on its system. This information can include the date on which the account was created, the length of service, records of login (*i.e.*, session) times and durations, the types of service utilized, the status of the account (including whether the account is inactive or closed), the methods used to connect to the account (such as logging into the account via the provider's website), and other log files that reflect usage of the account. In addition, Google often has records of the Internet Protocol address ("IP address") used to register the account and the IP addresses associated with logins to the account. Because every device that connects to the Internet must use an IP address, IP address information can help to identify which computers or other devices were used to access the account.

PROBABLE CAUSE

30. I submit this application for a "geofence" warrant to obtain information regarding a serial arsonist¹ who has set a spree of fires during a period that Washington state is facing an extreme risk of forest fires. Since the arsonist is setting the fires in a remote area, likely at night or early in the morning, there are very few investigative leads available. However, as explained below, these same factors significantly decrease the chance that the proposed geofence warrant will lead to an undue collection of data related to individuals unconnected to the arsons.

An Arsonist Is Responsible for at Least 12 Separate Fires

31. From April 2021 to present there have been approximately twelve suspicious fires within approximately a sixteen-mile radius of Mineral, WA. The first four fires occurred over four days, from April 14-17, 2021. The second set of fires occurred over a 6-day period, from July 9-14, 2021, and the latest fire was discovered on July 23, 2021.

32. The proposed geofence warrant is crafted to capture evidence related to the spree of fires that occurred on July 13-14, 2021, where five separate fires were

¹ Currently, it is unclear the fires at issue were caused by a single arsonist or multiple arsonists working together. For the sake of simplicity, I will refer to a single arsonist throughout this affidavit because the evidence indicates that the fires were set by at least one person using a motor vehicle.

discovered in the early morning hours. Three out of the five fires occurred on National Forest System (NFS) lands within the Western District of Washington's federal judicial district. Two of the fires were on the Tahoma State Forest, administered by the Washington Department of Natural Resources (DNR). Combined, these fires burned approximately 0.4 acres of NFS lands, plus about 0.2 acres of state lands. One of these fires on the Tahoma State Forest was less than 100 yards from the NFS boundary and was directly adjacent to a National Forest road.

33. These fires include the following:

- Cave Creek Fire, 07/13/2021, discovered at approx. 4:00 am, on State DNR land, FR 85
- Lake Creek Fire, 07/13/2021, discovered at approx. 6:00 am, on State DNR land, Rd 1
- Summit Fire, 07/14/2021, discovered at approx. 4:00 am, on NFS land, FR 74
- Coal Fire, 07/14/2021, discovered at approx. 4:00 am, on NFS land, FR 74
- Eagle Fire, 07/14/2021, discovered at approx. 4:00 am, on NFS land, FR 74

34. The first two fires occurred on the same day. The Cave Creek fire was discovered at approximately 04:00 am on July 13, 2021. Shortly later, the Lake Creek Fire was discovered around 6:00 am. These fires were within two miles of each other, and they were found on two roads that easily connect to one another.

35. The next three fires occurred on the following day (July 14, 2021), along the same road (Forest Route 74). These fires were easily accessible from nearby towns, as they were only 3-4 air miles from the closest towns.

36. The evidence overwhelming indicates that the five fires listed above are all human-caused fires. The following four facts, among others, support this conclusion:

1. **First**, the only natural cause of fire in a forest landscape is lightning. Historical lightning maps reveal that there was no lightning activity in the areas in question from July 1-19, 2021.

2. **Second**, during the time of day that the fires occurred (e.g., late at night or early in the morning), environmental conditions were substantially less conducive to burning, thereby ruling out many of the possible accidental or negligent causes of fire. This is also a common time when arson fires are lit in the wildland due to having few witnesses to catch the suspect near the fire scene. Given the prevailing environmental conditions at the time and location of ignition, these fires likely would have required more effort to ignite (e.g., creating a time-delay device, staging fuels to burn, using accelerants, etc.) as compared with accidental causes of wildland fires.

3. **Third**, the five fires are part of twelve fires that occurred in a pattern, in an area in which no other fires were reported. Notably, during the period in question, no other significant fires were reported surrounding the towns of Mineral, Elbe, Ashford, and Morton.

4. **Fourth**, the location of the five fires shows a common intent and design. Multiple fires being reported along a single road or route are common indicators that the fires were the result of an arson spree. Moreover, in each instance, there was a turn out off the road directly adjacent (or within .1 miles) to each fire scene. This is common for arson fires, as it provides a suspect opportunity to pull off the road, light the fire, and then either continue down the road or turn around and go back out the way they came.

The Time Frame for the Proposed Geofence Warrant

37. The timeframe of the proposed geofence has been selected in consideration of how environmental factors may have impacted the duration and burn pattern of the fires. Given the vegetation type of this area, the weather conditions, and other factors, these fires could have smoldered for hours before they were detected. This is especially true due to the remote area where the fires occurred as there would have been few witnesses to see and report them.

38. Given the lack of traffic on these roads (meaning less people to see and report fires) and the lack of intensity with which these fires burned, it was originally

1 thought that the time of ignition could have been as early as late afternoon the day before
2 the fires were discovered. Upon further investigation of environmental factors (humidity,
3 fuel moisture, slope, aspect, ambient temperature, etc.) and field visits to the fire scenes, I
4 and other investigators were able to narrow the period the fire was likely started to
5 sometime after 9:00 PM when the humidity rose and the temperature dropped each night.

6 39. Unfortunately, it is not possible to further narrow the time frame for when
7 the fires could have been started. The environmental factors present at the time cause
8 fires to burn slowly, which results in them often smoldering in one spot and not spreading
9 until environmental conditions become more conducive to fire. A slow
10 burning/smoldering fire leaves very few burn pattern indicators to be analyzed in a fire
11 investigation. This lack of indicators as well as a lack of people in the area to see and
12 report fires results in a broader timeframe for when the fire could have been lit. This is
13 the basis for the time frames I have requested under attachment A.

14 *The Geographic Boundary of the Proposed Geofence*

15 40. As seen in attachment A, the scope of this search is limited not only by
16 time, but also by location to remote, forested areas. Based on commonalities between the
17 various fires involved in this case as well as tactics that are commonly used by suspects
18 in wildland arson cases, it is believed that the suspect in this case is using a motor vehicle
19 as a mode of transportation to/from the crime scenes. Additionally, it appears that at
20 nearly every fire scene there is a turn-out or intersection within 0.1 miles of the fire
21 scene, which is common so that the suspect can utilize the turn-around spot to exit in the
22 same way that they entered the secluded area.

23 41. The geofences applied for in this warrant encompass 1.4-2.2 miles of
24 roadway in each perimeter. With reasonable speeds on these forest roads limited to 25-35
25 MPH, this results in someone passing through each geofence within 2.74 to 5.8 minutes.
26 Based on my training and experience as well as personal observations at these fire scenes,
27 there is very poor and spotty cell phone coverage on these remote forest roads. Therefore,
28 a sufficiently long stretch or road is necessary to ensure the suspect's cell phone connects
to its GPS or cell phone tower in the requested window. The geofence perimeters were

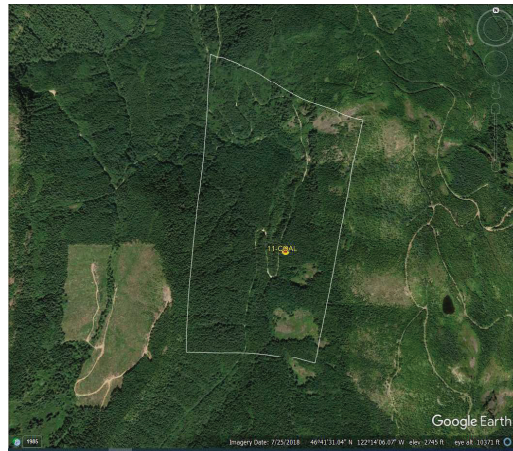
1 designed to include sufficient road length within the perimeter (e.g., incorporating
2 switchbacks), while not including any unintended targets (e.g., other roads, private
3 property, etc.).

4 42. The time and spatial limitations listed in attachment A of this search
5 warrant are intended to limit capturing unintended parties in this warrant. The very nature
6 of the location of this warrant in and of itself limits the amount of data that it will
7 encompass. National Forests are used for dispersed recreation, meaning that group
8 recreation is uncommon in these areas. These four locations are all on through roads that
9 do not have any developed recreation sites (such as campsites, trailheads, picnic tables,
10 restrooms, or any other recreational facilities) that would cause the average visitor to
11 linger in that spot. Further, National Forests tend to be most active during the day when
12 people go outside to recreate. Based on my training and experience with National Forests
13 across the American West, there is very little traffic on Forest Roads between the hours
14 of 9:00 pm to 6:00 am.

15 43. Residential use of National Forest System lands is illegal, and the areas
16 included in this warrant only include forest lands. Based on this information as well as
17 personal observation of these areas, I can attest that there are no cabins or other
18 residential sites included in the areas identified in this warrant.

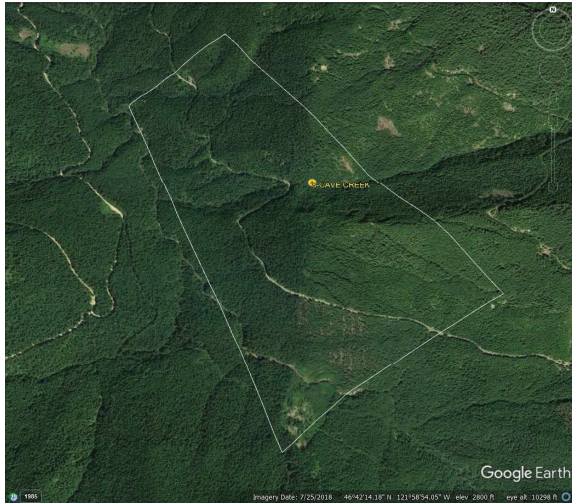
19 44. I spoke with US Forest Service Law Enforcement Officer Andrew Larson,
20 who patrolled this area of National Forest System lands from 2018-2020. Based on his
21 specific and intimate knowledge of the area, there would be very little if any people in the
22 search parameters during the overnight hours. LEO Larson stated that loggers use the
23 roads from about 6:00am – 6:00pm, and the only other traffic is from hunters in the fall.
24 LEO Larson stated that even in daytime hours, he would expect to only see
25 approximately 10 vehicles pass along these roads in a day. Common uses of this section
26 of forest are limited to firewood cutting and off-highway vehicle use, which are
27 prohibited in the geofence search parameters. The only overnight use he is aware of is for
28 illegal purposes, such as firewood theft. Additionally, LEO Larson stated that FR 74 is
“effectively abandoned,” as it is a logging road no longer maintained by the USFS. LEO

Larson stated that most roads off FR 85 and 75 are dead end roads that are brushed over old spur roads used for logging in a bygone era. Therefore, the scope of this warrant is unlikely to capture any cell phones other than the suspected arsonist. **Geofences 1 and 2:** Search parameters one and two in attachment A are nearly over 6 road miles from the closest town of Mineral, WA, with a population of only approximately 50 people. Forest Route 74 (which is the sole road within these geofences) is not a through road, and any commercial travel is restricted by federal law. There is no town or other services that FR 74 would be utilized to provide a transportation link to those services. As shown in the following satellite images of the search parameters, both areas are in remote, forest locations:



45. **Geofences 3 and 4:** Search parameters three and four in attachment A meet similar criteria. The closest medium-sized town is Ashford, WA, which has a population of approximately 531 people. As with search parameters one and two, there are no residences, recreation facilities in the specified area, nor are the roads used to access any other towns or services. Ashford is about 5.3 miles from search parameter number four, and about 7.5 miles from search parameter number three. The closest town with full services is the city of Morton, WA, which is about 13 miles from Mineral and

24 miles from Ashford, WA. As shown in the following satellite images of the search parameters, both areas are in a remote, forest location:



The Investigative Necessity for the Proposed Geofence

46. Fires are inherently dangerous to the natural property of the United States, as well as to thousands of innocent people in the immediate community as well as those farther away. Forests fires have become larger and untamable in recent years, resulting in acute dangers such as burning down entire towns, killing and injuring people, causing health crisis from smoke, and loss of the natural landscape and animal habitats. Fires also leave a negative lasting effect in the form of billions of dollars in property losses, economic losses for communities whose economy depends on natural landscapes, flooding off mountains that have been stripped of their vegetation, and loss of aesthetic value of the landscape.

47. Arson fires such as these take these dangers and increase them significantly. The patterns in this arson spree are especially dangerous because the suspect has started fires outside several valley communities with limited routes of escape. Further, by lighting the fires in areas where they are less likely to be seen for hours or days, the suspect allows for the fires to grow unnoticed, which dramatically increases the risk of these fires to the surrounding communities. These factors combined with current

1 environmental conditions (lack of winter snowpack, lack of seasonal rainfall, drying out
2 vegetation with increased summer temperatures) make it vital to community safety to
3 detect and apprehend the arsonist before one of the fires turns into a full blown forest fire
4 that results in greater loss of life and property.

5 48. Due to the remote location in which the arsonist is operating, there are very
6 few investigative leads that can be followed. Obtaining information from surrounding cell
7 towers and the proposed geofence warrant are the best, and perhaps only, investigative
8 avenues available to law enforcement for obtaining historical evidence of who set the
9 fires. Based on my training and experience, I know that most persons carry a cell phone
10 and/or other computer device with them, either on their person or in their vehicle. I know
11 that nearly every person that I contact while on patrol on NFS lands has a cell phone that
12 they often use for mapping, communication, or informational applications.

13 49. Based on the foregoing, I submit that there is probable cause to search
14 information that is currently in the possession of Google and that relates to the devices
15 that reported being within the Target Locations described in Attachment A during the
16 time periods described in Attachment A for evidence of the crime(s) under investigation.
17 The information to be searched includes (1) identifiers of each device; (2) the location(s)
18 reported by each device to Google and the associated timestamp; and (3) basic subscriber
19 information for the Google account(s) associated with each device.

20 50. The proposed warrant sets forth a multi-step process whereby the
21 government will obtain the information described above. Specifically, as described in
22 Attachment B, Section I:

23 1. Using Location History data, Google will identify those devices that
24 it calculated were or could have been (based on the associated margin of error for
25 the estimated latitude/longitude point) within the Target Locations described in
26 Attachment A during the time periods described in Attachment A. For each
27 device, Google will provide an anonymized identifier, known as a Reverse
28 Location Obfuscation Identifier ("RLOI"), that Google creates and assigns to each
device for purposes of responding to this search warrant; Google will also provide

1 each device's location coordinates along with the associated timestamp(s),
2 margin(s) of error for the coordinates (*i.e.*, "maps display radius"), and source(s)
3 from which the location data was derived (*e.g.*, GPS, wi-fi, bluetooth), if available.
4 Google will not, in this step, provide the Google account identifiers (*e.g.*,
5 example@gmail.com) associated with the devices or basic subscriber information
6 for those accounts to the government.

7 2. The government will identify to Google the devices appearing on the
8 list produced in step 1 for which it seeks the Google account identifier and basic
9 subscriber information. The government may, at its discretion, identify a subset of
10 the devices.

11 3. Google will then disclose to the government the Google account
12 identifier associated with the devices identified by the government, along with
13 basic subscriber information for those accounts.

14 51. This process furthers efficiency and privacy by allowing for the possibility
15 that the government, upon reviewing contextual information for all devices identified by
16 Google, may be able to determine that one or more devices associated with a Google
17 account (and the associated basic subscriber information) are likely to be of heightened
18 evidentiary value and warrant further investigation before the records of other accounts in
19 use in the area are disclosed to the government.

20 52. The proposed warrant would not authorize the disclosure or seizure of any
21 email communications or messages (SMS text or Google chat).

22 //

23 //

24 //

CONCLUSION

53. Based on the foregoing, I request that the Court issue the proposed warrant, pursuant to 18 U.S.C. § 2703(c).

54. I further request that the Court direct Google to disclose to the government any information described in Section I of Attachment B that is within its possession, custody, or control. Because the warrant will be served on Google, who will then compile the requested records at a time convenient to it, reasonable cause exists to permit the execution of the requested warrant at any time in the day or night.

Respectfully submitted,

CHRISTIAN ROPER

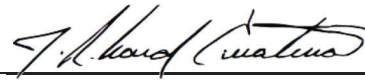
Digitally signed by CHRISTIAN
ROPER
Date: 2021.07.29 13:40:20 -07'00'

CHRISTIAN ROPER

Law Enforcement Officer

US Forest Service

The above-named agent provided a sworn statement to the truth of the foregoing affidavit by telephone on the 30th day of July, 2021.



J. Richard Creatura

United States Magistrate Judge

ATTACHMENT A

Property to Be Searched

This warrant is directed to Google LLC and applies to:

1. Location History data, sourced from information including GPS data and information about visible wi-fi points and Bluetooth beacons transmitted from devices to Google, reflecting devices that Google calculated were or could have been (as indicated by margin of error, *i.e.*, “maps display radius”) located within the geographical region bounded by the latitudinal and longitudinal coordinates, dates, and times below (“Initial Search Parameters”); and
2. Identifying information for Google Accounts associated with the responsive Location History data.

//

//

Initial Search Parameters

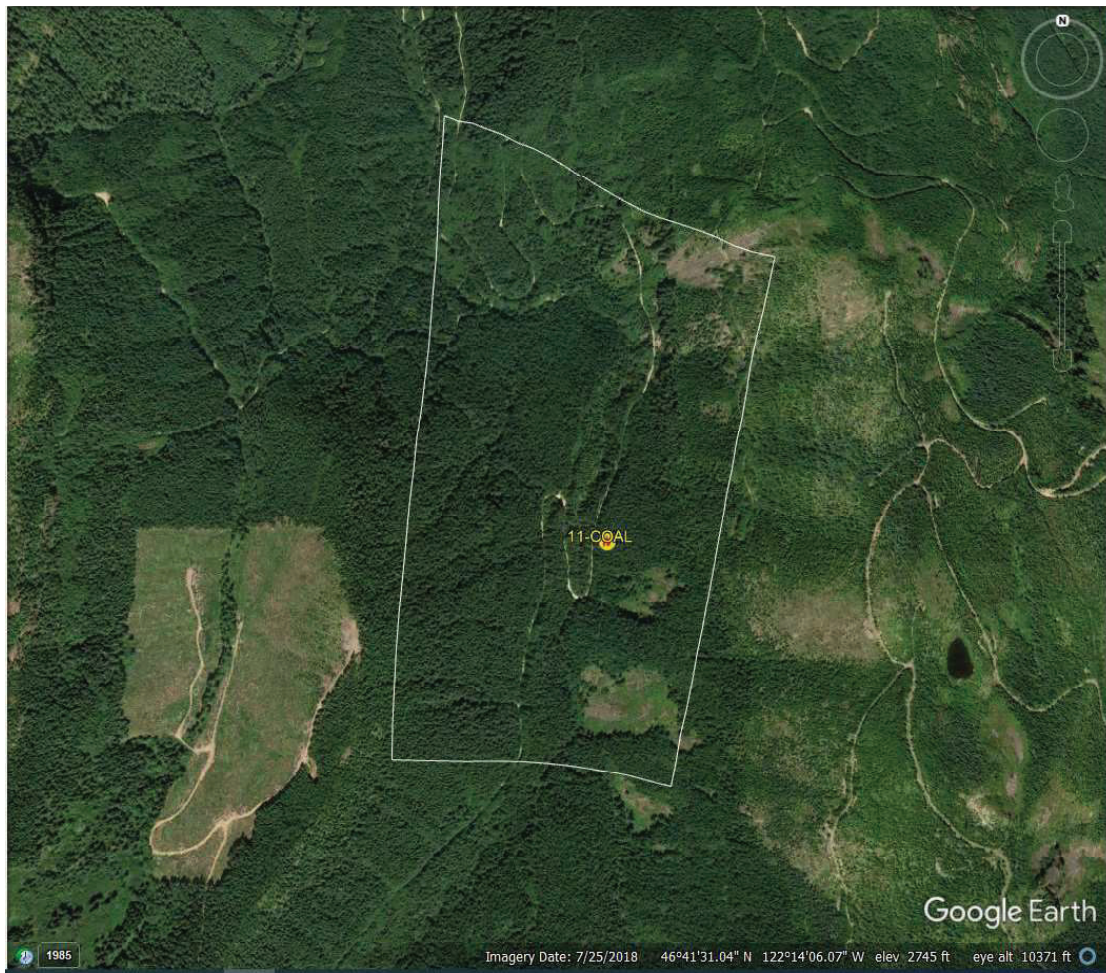
Search Parameter 1:

- Date: From July 13, 2021 at 9:00 pm (PDT) to July 14, 2021 at 4:00 am (PDT)
- Target Location: Geographical area identified as
 - A polygon defined by the following latitude/longitude coordinates (decimal degrees) connected by straight lines:
 - SE corner: 46°40'25.5"N X -122°14'09.8"W
 - SW corner: 46°40'13.7"N X -122°15'04.4"W
 - NW corner: 46°40'38.1"N X -122°15'16.8"W
 - NE corner: 46°40'55.2"N X -122°14'14.6"W



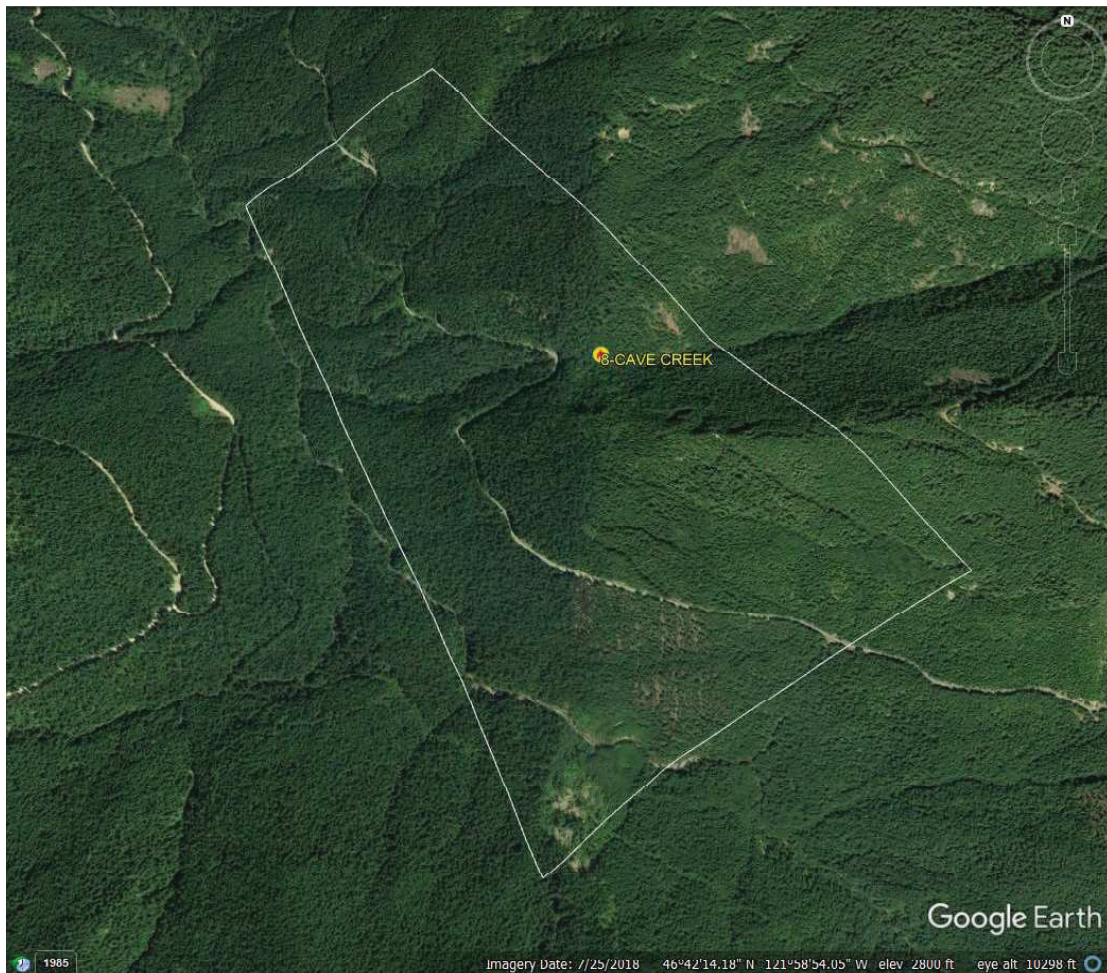
Search Parameter 2:

- Date: From July 13, 2021 at 9:00 pm (PDT) to July 14, 2021 at 4:00 am (PDT)
- Target Location: Geographical area identified as
 - A polygon defined by the following latitude/longitude coordinates (decimal degrees) connected by straight lines:
 - SE corner: 46°41'09.9"N X -122°14'04.0"W
 - SW corner: 46°41'12.4"N X -122°14'34.3"W
 - NW corner: 46°42'06.6"N X -122°14'31.9"W
 - NE corner: 46°41'50.1"N X -122°13'53.2"W



Search Parameter 3:

- Date: From July 12, 2021 at 9:00 pm (PDT) to July 13, 2021 at 4:00 am (PDT)
- Target Location: Geographical area identified as
 - A polygon defined by the following latitude/longitude coordinates (decimal degrees) connected by straight lines:
 - S corner: 46°41'45.4"N X -122°8'55.6"W
 - E corner: 46°42'07.9"N X -122°58'10.0"W
 - N corner: 46°42'48.2"N X -122°59'08.6"W
 - W corner: 46°42'39.7"N X -122°14'35.0"W



Search Parameter 4:

- Date: From July 12, 2021 at 9:00 pm (PDT) to July 13, 2021 at 6:00 am (PDT)
- Target Location: Geographical area identified as
 - A polygon defined by the following latitude/longitude coordinates (decimal degrees) connected by straight lines:
 - S corner: 46°42'43.4"N X -122°00'38.1"W
 - W corner: 46°43'05.5"N X -122°01'43.6"W
 - N corner: 46°43'35.3"N X -122°01'22.4"W
 - E corner: 46°43'04.6"N X -122°00'08.5"W



ATTACHMENT B

Items to Be Seized

I. Information to be disclosed by Google

The information described in Attachment A, via the following process:

1. Google shall query location history data based on the Initial Search Parameters specified in Attachment A. For each location point recorded within the Initial Search Parameters, and for each location point recorded outside the Initial Search Parameters where the margin of error (*i.e.*, “maps display radius”) would permit the device to be located within the Initial Search Parameters, Google shall produce to the government information specifying the corresponding unique device ID, timestamp, location coordinates, display radius, and data source, if available (the “Device List”).

2. The government shall review the Device List and identify to Google the devices about which it seeks to obtain Google account identifier and basic subscriber information. The government may, at its discretion, identify a subset of the devices.

3. Google shall disclose to the government identifying information, as defined in 18 U.S.C. § 2703(c)(2), for the Google Accounts associated with each device ID appearing on the Device List about which the government inquires.

This warrant does not authorize the disclosure or seizure of any email communications or messages (SMS text or Google chat).

II. Information to Be Seized

All information described above in Section I that constitutes evidence of violations of 18 USC § 1855, 36 CFR 261.5 (a), 36 CFR 261.5, committed between July 13-14, 2021, involving an unknown person or persons.